Claims 4, 8, 11-14, 18, 22, 27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collier in view of U.S. Patent No. 5,457,491 to Mowry [claims 4, 8, 18, 22, 27 and 31].

REMARKS

Reconsideration and allowance of the claims as amended is requested for the following reasons.

The present invention is directed to emulation of motion picture film's tonescale and color for electronically captured images, wherein the emulation is accomplished by: 1) transforming the electronically captured image data of a scene into a linearized camera exposure data, 2) subsequent transformation of the data with a linear function that emulates a film exposure of the film reproduction system, 3) subsequent transformation of the data with a non-linear function that renders the exposure corrected images with the tone scale of the film reproduction system and, lastly, 4) transformation of the tone scale corrected images with a linear function that emulates the film color look provided by the film reproduction system. Hence, the present invention enables an electronic image capture device to become a faithful recorder of the relative scene exposure by linearizing the capured image information similarly as what happens to image data originally captured on film during film origination (otherwise referred to as a motion picture negative film printed onto a motion picture print film that is displayed, or a reversal motion picture system in which a reversal film is displayed). This process is in stark contrast to the cited art wherein the film undergoes a telecine transfer operation for video display, without consideration of the well-known interlayer development effects present in color negative film. As such, good estimates of actual film exposures are not possible.

Specifically, Collier discloses in his patent document a "method and system for compressing" video in a manner characteristic of the compression defined by a traditional sensitometric film curve. Collier's method is "one more means of implementing" the film-like compression that has been implemented previously by others to emulate the sensitometric film curve. For instance, such as those incorporating analog circuits or digital 1D LUTs. Collier's method and system is essentially described by the "compression function" contained in the various claims of his patent. This function is one of several techniques that could

possibly be used to implement a 1D LUT in one of the steps of the current invention that are necessary to carry out the "complete" emulation process, assuming that the 1D LUT function required a film-like sensitometric compression characteristic.

A description of Collier's patent that pertains to the transfer of film to video in telecines also teaches away from the Applicants' claimed invention (referring to independent claims 1, 15, 21, and 24) of emulating the look of film origination provided by the film reproduction system, as if a motion picture negative film printed onto a motion picture print film that is displayed, or a reversal motion picture system in which a reversal film is displayed. See, Collier, Col. 3:16-25.

Referring to independent claims 1, 15, 21, and 24, Collier does not teach transforming electronic camera exposure data into tonescale- corrected electronically captured images. Collier's use of a look-up table (LUT) is not at all like that taught by the Applicants in that the two are entirely different in content. The Applicants' LUTs are predetermined before they are utilized to give the filmic look. Applicants' first LUT, which is optional, counteracts any nonlinearities in the electronic capturing device. Hence, Applicants' use of LUTs and matrices to transform electronic camera exposure data into tone-scale corrected electronically captured images is novel and not obvious. Applicants' claimed invention is not obvious in light of Collier, because Collier utilizes log masking and published Hurter-Driffield (HD) characteristic curves to obtain film exposure values which in itself teaches away from Applicants' claimed invention. Masking alone is well-known as not being sufficient for establishing the relationship between film density and original exposure for (modern) color negative (capture) films. The Applicants have included a Society of Motion Picture and Television Engineers (SMPTE) article that supports the above position that log masking for unwanted dye absorption correction (as disclosed in Collier) is not enough because it does not take into consideration film inter-layer development interactions that contribute to color correction (which the Applicants are addressing in the present invention).

In addition to Collier teaching away from Applicants' claimed invention, the Examiner has failed to make a *prima facie* case, because at least one of Applicant's features is missing in the cited combination. It is believed that

independent claims 1, 15, 21, and 24 are unobvious in light of Collier. The remainder of the claims are dependent from these claims and are considered to be patentable for at least the same reasons.

Applicants have reviewed the cited art made of record and believe that singly or in any suitable combination, they do not render Applicants' claimed invention unpatentable. It is believed that the claims in the application are allowable over the cited art and such allowance is respectfully requested.

Should the Examiner consider that additional amendments are necessary to place the application in condition for allowance, the favor is requested of a telephone call to the undersigned counsel for the purpose of discussing such amendments.

Respectfully submitted,

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